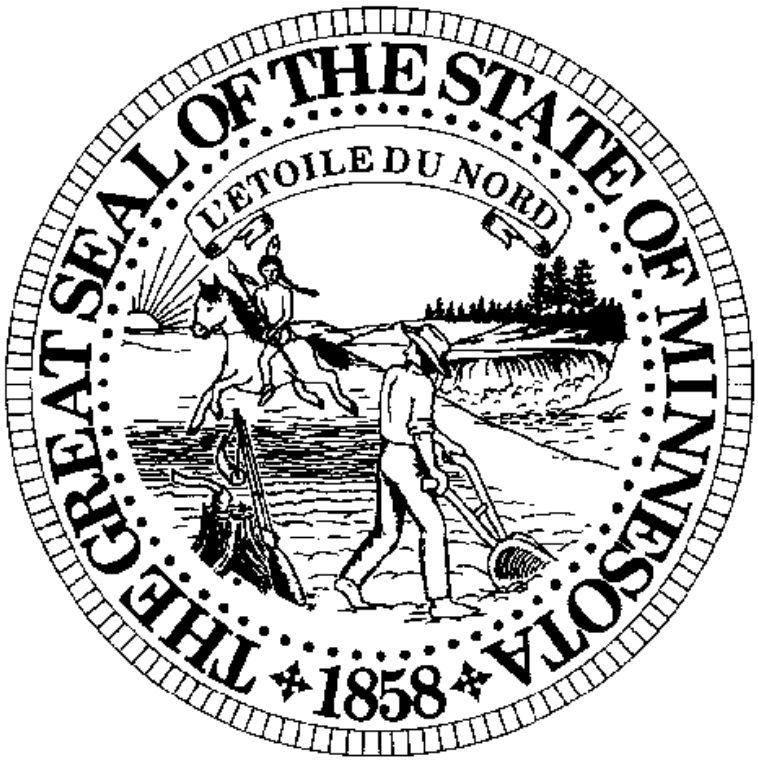
Minnesota
Emergency Alert System
Statewide Plan



Prepared by the
Minnesota Emergency Alert System Team
(MnEAST)

Revised 25July 2001

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Minnesota

Emergency Alert System

Statewide Plan

I. REASON FOR PLAN

The State of Minnesota is subject to major emergencies and disasters -- both natural and technological -- which can pose a significant threat to the health and safety of the public. The ability to provide citizens with timely emergency information is a priority of emergency managers statewide. The Emergency Alert System (EAS) was developed by the Federal Communications Commission (FCC) to replace the Emergency Broadcast System (EBS). The EAS is capable of alerting the general public more effectively, reliably, and with built-in redundancy.

II. PURPOSE AND OBJECTIVES OF PLAN

A. Purpose

When emergencies and disasters of all types occur, the rapid and effective dissemination of instructions and other essential information can significantly help to reduce loss of life and property. The EAS was designed to provide that information to the public immediately. However, the EAS will only work through a coordinated statewide effort. The purpose of this plan is to establish a standardized, integrated EAS communications "web" capable of enhancing the rapid dissemination of emergency public information.

B. Objectives

1. To describe the EAS administrative structure within Minnesota.
2. To establish who has the authority to originate an EAS notification.
3. To determine the protocol for EAS activation.
4. To identify who has the capability of encoding EAS messages.
5. To cite the technical parameters of the EAS.
6. To establish standards for training, exercising, and testing of the EAS capabilities.

III. ORGANIZATION OF PLAN

The Minnesota Emergency Alert System Statewide Plan is divided into two major parts: a basic plan and eleven supporting annexes.

A. Basic Plan

The basic plan contains the necessary guidance for the voluntary coordination between appropriate authorities (e.g., NWS, emergency management, local, state, or federal government, etc.) and the broadcast and cable industries to communicate with the general public during a national, state or local emergency situation.

B. Annexes

The annexes elaborate on the responsibility assignments made in the basic plan and the procedural and technical information required for activation of the EAS. They also include the plans developed by every local EAS operational area. The annex contents are as follows:

Annex A: Operating Procedures

Annex B: Event Codes

Annex C: Equipment Settings

Annex D: Testing

Annex E: Cable/Broadcast Monitoring Assignments

Annex F: Maps

Annex G: EAS State and Local/Regional Teams

Annex H: Glossary and Acronyms

Annex I: Local/Regional Plans

Annex J: Authorized EAS Originating Organizations

Annex K: Memorandum of Understanding

IV. LEGAL BASES AND REFERENCES

This plan has been developed in accordance with Federal Communications Commission (FCC) requirements, as well as State of Minnesota statutes. Legal bases and references include:

A. Federal Telecommunications Act of 1996.

B. Federal Communications Commission, Report & Order FCC 94-288.

C. FEMA Executive Order 12472: Assignment of National Security and Emergency Preparedness Telecommunications Functions dated April 3, 1984.

D. FEMA Executive Order 12656: Assignment of Emergency Preparedness Responsibilities dated November 18, 1988.

E. FEMA Statement of Requirements for Presidential Communications dated September 15, 1995.

F. Title 47 U.S.C. 151, 154 (I), 303 (r), 524 (g), and 606; 47 CFR Part 11, FCC Rules & Regulations, Emergency Alert System.

G. FEMA CPG 1-40 & 1-41 (drafts).

H. Minnesota Statutes, Chapter 12, as amended.

V. EAS ORGANIZATION

Organizing the EAS to work within Minnesota is a cooperative effort of several private businesses and public agencies. The FCC created a state emergency communications committee (SECC) in each state and appointed a representative from the broadcast industry and a representative from the cable industry to co-chair this committee. In order to alleviate any misconceptions regarding the purpose of this committee in Minnesota, the members determined that it was more appropriate to rename the committee the *Minnesota Emergency Alert System Team* (MnEAST). The goal of the MnEAST is to coordinate the development of the Minnesota Statewide EAS Plan and to coordinate EAS operations within the state.

To begin organizing the EAS in this state, certain general considerations were addressed. The listening and viewing habits of the public were recognized as the basis for effectiveness of the Minnesota EAS. The typical reaction of the average person to turn on a radio or television set in time of emergency is considered vital to EAS operations. Educating the public about the EAS as an emergency communications tool and about the devices available to receive the EAS information will be a major component to making the EAS a viable system. Other characteristics of the public were also considered, including language differences and the special needs of the hearing and visually impaired communities. Procedures established within the state must ensure that all EAS links react in a coordinated fashion. Each link must be aware of its role and activation authority.

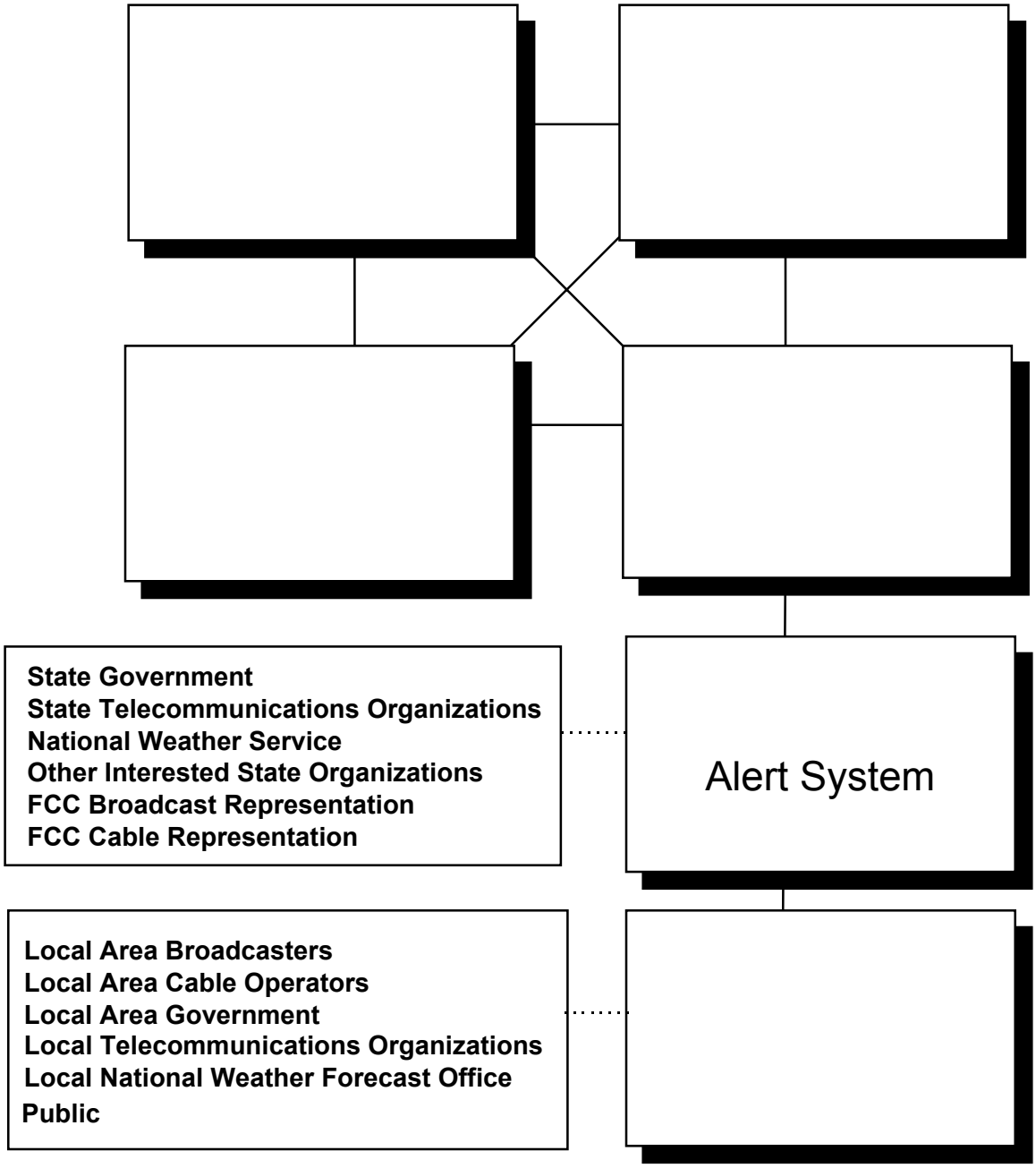
Teams on two operational levels will accomplish coordination of the EAS within Minnesota. The MnEAST team is the statewide coordinating committee for the EAS. Local EAS Team (LEAST) will coordinate the EAS within a local/regional operational area. Together, the MnEAST and LEAST teams direct the EAS "organization" for Minnesota.

The following agencies and organizations are suggested members for the state and local EAS teams:

Agencies & Organizations	***MnEAST Member***	***LEAST Member***
Amateur radio operators (RACES, ARES, etc.)		X
Association of Minnesota Emergency Managers	X	
Association of Public Safety Communications Officials (APCO)	X	
Wireless telecommunications industry	X	X
Broadcast industry	X	X
Cable industry	X	X
County/local emergency management directors		X
MN Department of Administration - 911 coordinator	X	
MN Department of Transportation	X	X
MN Division of Emergency Management	X	X
MN State Patrol Division	X	X
Minnesota Broadcasters Association	X	
Minnesota Telephone Association	X	X
National Weather Service offices	X	X
Police chiefs, fire chiefs		X
Sheriffs / public safety answering points (Pass)		X

A complete list of all current members of the MnEAST and the local EAS teams is located in Annex G. **See Charts A for a diagram of how the EAS is organized.**

Chart A: Organization of the EAS Plan Administration



***Note: The MnEAST and LEAST teams are Minnesota's equivalent Of the FCC-designated SECC & LECC, respectively.**

VI. ACTIVATION AUTHORITIES AND RESPONSIBILITIES

A. Activation Authorities

The agencies listed below are the only sources authorized by the MnEAST to originate an EAS notification for the emergency types listed. In the event of equipment failure, other organizations not listed may be requested to encode an EAS alert, but the order to begin an EAS alert may be issued only by these agencies:

	EMERGENCY TYPE	*AUTHORIZED ORIGINATORS*	*CONDITIONS/EXCEPTIONS*
NATIONAL	Emergency Action Notification	President	Only authorized originator of national EAS notifications.
STATE	Natural Emergency	National Weather Service	May originate any weather-related alert.
		Governor	May only originate weather statements using the "CEM" event code.
	Technological Emergency	Governor Minnesota Duty Officer	Notifications must be coordinated with public safety officials – particularly in event of a nuclear power plant emergency.
	Civil Emergency	Governor	Only for civil emergencies involving multiple jurisdictions.
LOCAL	Natural Emergency	National Weather Service	May originate any weather-related alert.
		Public Safety officials (See local EAS plan)	May only originate local weather statements using the "CEM" event code.
	Technological Emergency	Public Safety officials (See local EAS plan)	Any official may originate, except for a nuclear power plant emergency. Then, the sheriff is the only authorized originator and only for a "Rapidly Escalating Event."
	Civil Emergency	Chief Elected Officials Public Safety officials (See local EAS plan)	May only originate for civil emergencies involving a single jurisdiction.

B. Activation Responsibilities

1. National Activation

   All broadcasters (starting January 1, 1997) and cable operators (by 1999) are mandated to install and operate a certified EAS encoder/decoder and to conduct monthly and weekly tests. Broadcasters and cable operators can choose to participate at the national level (PN) or have a designation of non-participating national (NP).

2. National Weather Service

   It is expected that most weather-related alerts will originate from the National Weather Service (NWS). The NWS local forecast office is responsible for originating these weather alerts.

3. Local Area Activation

   The local area activation points will activate the EAS for local emergencies.

4. State Activation

   The Governor, through the Minnesota Duty Officer, will activate the EAS for all statewide emergencies and for monthly tests.

VII. CONCEPT OF OPERATIONS

A. Overview of the EAS

The primary goal of emergency public information is to minimize casualties and property damage by ensuring that accurate, complete, timely, understandable and appropriate information is disseminated to the public. This includes keeping the public informed, on a 24-hour basis if necessary, about the progress of an emergency as it unfolds, or informing them that a real emergency does not exist despite perceptions to the contrary. EAS combines the speed and accuracy of the mature technology with the abilities of the media for dissemination and supporting information.

The EAS is a simple process. During an emergency, an official agency may decide it is necessary to send certain important information to the public. The agency will "encode" an EAS notification at their facility. This notification begins with a short "burst" of digital information -- a header code --, which notifies receiving "decoders" of the coming message. This header code includes information about what type of alert is being issued, who is sending the alert, what time it was issued, how long it will be in effect, what areas are affected, etc. The header code is followed by an attention signal, an analog audio reading of the emergency information, and a digital end-of-message code, which resets all equipment for the next use.

This EAS notification is received by many "decoders" simultaneously. The decoders decipher the digital information contained in the alert. Radio and TV stations with decoders can broadcast this information immediately to their listening audiences. Cable operators with decoders can program the information to automatically display on all of their channels simultaneously. Decoders in nearby NWS offices, sheriff's dispatch centers, and private homes, will also receive the original EAS transmission simultaneously and be able to take appropriate action immediately. Still other decoders will relay the notification to decoders outside the range of the original transmission.

B. EAS Operations Policies

The EAS is an effective tool for notifying the public of an occurring or imminent emergency situation. This system is flexible enough to provide sufficient warning to citizens of a community, a state, or the entire country at a moment's notice. It is intended to alert the public with a two-minute message and tell them what media to turn to for further information. At that point, the EAS system should cease and further details and developments should be made available through regular media outlets. (The EAS is not intended to be a *broadcasting* system providing continuous programming and supporting information, like the old EBS that it replaces.)

Unnecessary or vague messages would undermine the effectiveness of future EAS notifications. Therefore, EAS notifications should be clear, concise, and used only when absolutely necessary to protect lives or property. To ensure accountability and responsible use of the EAS, the MnEAST has determined that all EAS notifications may only be originated by those government agencies with authority assigned by the FCC and/or the MnEAST. **(See Section VI. above for details.)** ***Federal, state and local laws prohibit anyone without cause or authority from originating an EAS notification.***

C. Originating an EAS Notification

In the event of a national emergency, the President may decide to address the entire nation. The White House Communication Agency will transmit an Emergency Alert Notification (EAN) directly from the White House and, through FEMA's Primary Entry Point System, disseminate it nationally through the National Primary points.

During a statewide or local emergency, an authorized agency may decide to issue an EAS notification. These originating agencies will either create the message and initiate EAS notification from their own equipment, request the assistance of the nearest authorized originating agency, or arrange transmission through pre-determined agreements with the Local Primary station.

D. Relaying EAS Messages

For national notifications, the EAS message is relayed from the origination point (in this case the National Primary) to the State Relay and on to the Local Primary station for each local area. Statewide emergencies are directed to the State Primary (SP) and then to the State Relay (SR) and Local Primary (LP) points. Local emergencies would either be sent to an LP or may be disseminated directly from an authorized originating agency.

All of the above relays will attempt to provide two or more routes for dissemination, to increase reliability through redundancy and improved availability.

E. Disseminating EAS Messages

Once a message (national, state or local) reaches the Local Primary points, it is sent directly to broadcasters, cable operators and other telecommunications systems throughout the local operational area. For television, in addition to the 'in-band' audio message, it is required that the EAS message include a visual crawl across the top one-third portion of the picture, or where it will not interfere with other visual messages. Radio stations also broadcast the EAS message 'in-band'. The use of the radio broadcast data service (RBDS) or other subcarriers are allowed and encouraged.

Depending on how the EAS decoder is programmed at each broadcast station and cable system, programming will be preempted and the EAS message transmitted either automatically or manually.

Chart B: Interrelationship of Agencies During National EAS Activation

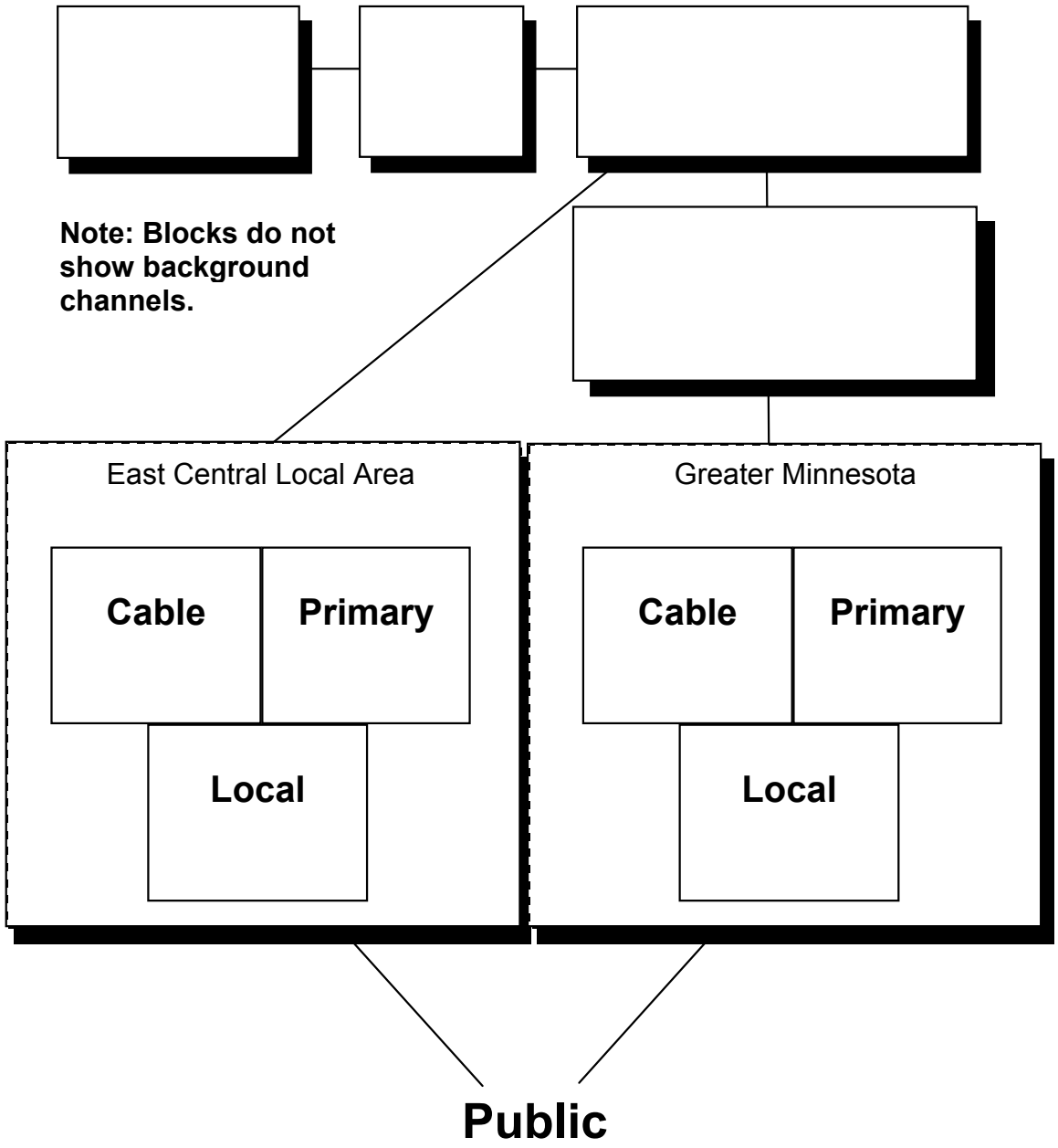


Chart C: Interrelationship of Agencies During State EAS Activation

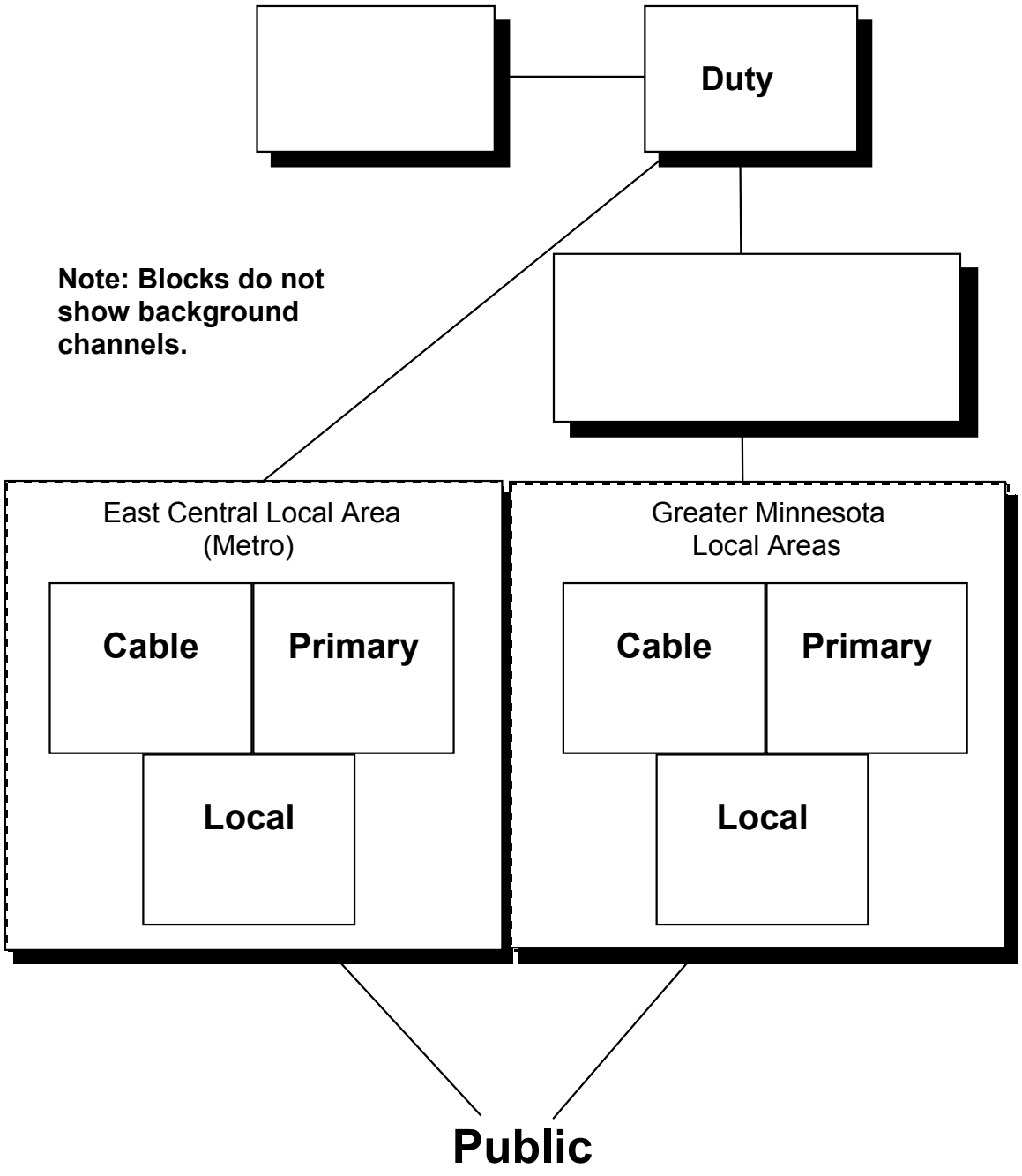
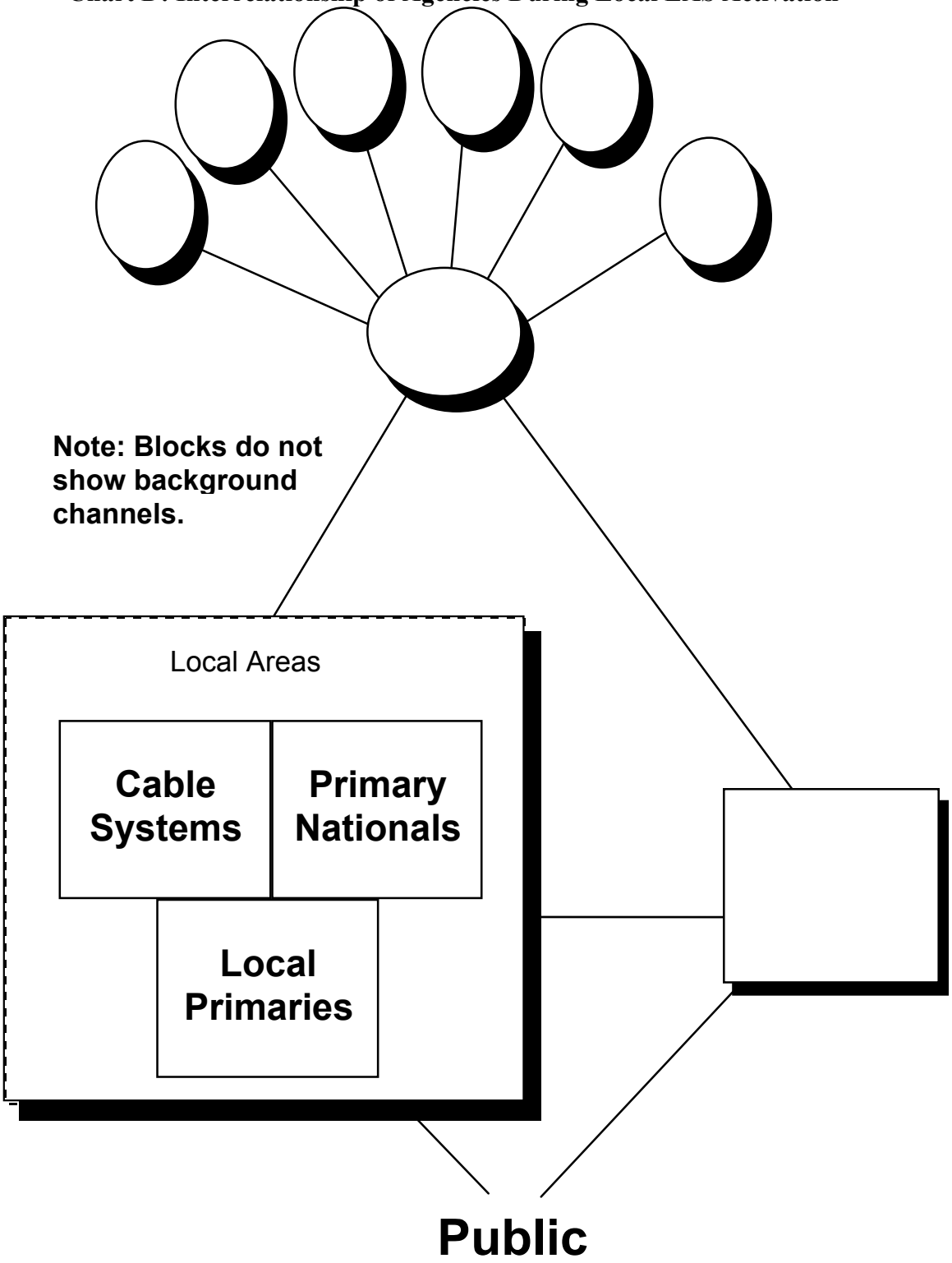


Chart D: Interrelationship of Agencies During Local EAS Activation



VIII. TRAINING AND TESTING

A. Training

Proper training must be accomplished for the EAS to succeed. Coordination of EAS training at the origination points, relay services, broadcast/cable, and public are all necessary for EAS. Training programs on EAS equipment and procedures in Minnesota will be coordinated by the MnEAST and LEASTs. This training will include: how to program encoders and decoders per the state and local plans, proper operating procedures during an emergency, and informational broadcasts to the public to inform them of the EAS.

As EAS technology changes, the training must change as well. The EAS is designed to be adaptable and will require skills upgrading as time goes on. Organizations that have the time are encouraged to participate in the EAS training and operational aspects, and then share this information with others.

B. Testing

In accordance with FCC rules, tests of EAS procedures will be conducted at regular intervals. Additional tests may be performed at anytime. The national and/or local EAS system is subject to the types of tests listed below. **See Annex D for further details about the test types, requirements, schedules, and procedures.**

1. Required Weekly Test (RWT)

   The Required Weekly Test is an independent weekly test of Local EAS equipment only involving decoding and encoding of EAS header codes and end-of-message (EOM) codes. The RWT is only conducted by broadcasters and cable systems.

2. Required Monthly Test (RMT)

   The Required Monthly Test is a coordinated test of EAS operations involving the full receiving and transmission of EAS codes, Attention Signal, EAS test programming, and EAS EOM codes. The RMT will originate from Local or State Primary sources on a rotating, scheduled basis. The RMT involves all EAS participants in the state.

3. Periodic National Tests

   National Primary sources will conduct tests of the National EAS as appropriate. The purpose of testing on a national scale is to check circuit continuity between FEMA and National Primary Stations. The public may not necessarily hear these national tests.

4. EAS Activation and Special Tests

   A real EAS activation at the state or local area level by a broadcast station or cable system may be conducted in lieu of the required monthly or weekly tests. This substitution applies to all who relay the transmission.

IX. PLAN MAINTENANCE AND DISTRIBUTION

The MnEAST has the authority and responsibility for maintenance of this plan. The plan will be reviewed and revised as needed. Agencies identified in this document will provide updated information

about their responsibilities so that plan revisions can be made. Changes to the plan will also be made to address deficiencies identified in reviews, tests and activation.

Current copies of this plan will be distributed to:

A. All broadcast stations and cable systems in Minnesota with EAS responsibilities;

B. Affected federal and local agencies;

C. The Minnesota Legislative Reference Library and other public libraries, as needed;

D. Any participating private organization that contributes to the operation of the EAS system.

All plan maintenance and distribution conducted by the MnEAST will be coordinated through the Minnesota Division of Emergency Management (DEM). Additional copies of the plan are available by contacting a DEM representative from the MnEAST. **See Annex G for contact names and telephone numbers.**

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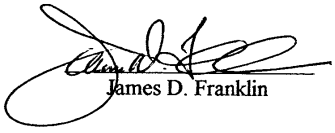
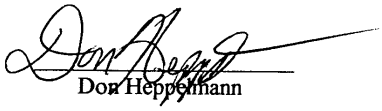
X. APPROVAL AND CONCURRENCE

APPROVAL:

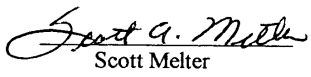
DIRECTOR, Minnesota Division of Emergency Management


James D. Franklin 10/10/97 Date

CO-CHAIRMAN, Minnesota Emergency Alert System Team, Broadcast Representative


Don Heppermann 10/10/97 Date

CO-CHAIRMAN, Minnesota Emergency Alert System Team, Cable Representative

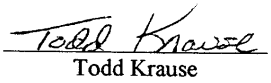

Scott Melter 10/10/97 Date

CHIEF, COMPLIANCE AND INFORMATION BUREAU, Federal Communications Commission

[Signature pending]

CONCURRENCE:

WARNING COORDINATION METEOROLOGIST, National Weather Service


Todd Krause 10/12/97 Date

PRESIDENT, Minnesota Broadcasters Association


Jim du Bois 10/14/97 Date

PRESIDENT, Minnesota Cable Television Association

[Signature pending]

I. OVERVIEW

For the EAS to function properly for *every* activation (test or actual emergency), standard operating procedures (SOPs) must be outlined for all operators of EAS equipment. These SOPs must be performed thoroughly and accurately every time for the EAS to work. This annex will provide the information necessary for all EAS participants to perform their assigned tasks.

II. ORIGINATION PROCEDURES

A. National Weather Service personnel

NWS personnel should issue EAS weather alerts via the type-written NWS wire, the National Warning System (NAWAS), and on NOAA weather radio using the NOAA-SAME/EAS codes. NWS procedures should be followed relating to the transmission of the SAME/EAS codes, the 1050 Hz alert tone, the reading of the weather bulletin script, and finally the end-of-message or EOM code.

NOAA weather radio is expected to become an "all-hazard" radio network in the future. Currently, the Minnesota Division of Emergency Management has an agreement with the NWS Forecast Office in Chanhassen, Minnesota, to allow the NOAA weather radio to be used for technological emergencies. Alerts for non-weather emergencies may soon be relayed by the NWS at the request of authorized officials. In the event that this occurs, the procedures listed below (and those found in the applicable Local Area EAS Plan) should be followed.

B. Emergency Services personnel

The EAS is designed so that agencies with an emergency message can simultaneously transmit to all area broadcasters and cable operators through the National Weather Service or Public Safety Answering Point (PSAP). The most accessible method for initiating the EAS is via the radio at the PSAP (usually a county sheriff's dispatch) or other emergency government two-way radio channel. An EAS digital encoder is needed in order to generate the EAS message. The encoder then feeds the encoded alert message into the two-way radio, over which it will be received by local broadcasters, cable operators, and other listeners with the proper decoding hardware. In turn, the EAS decoders operated by the broadcasters and cable operators will be manually or automatically triggered to relay the alert message to the public.

Purchasing an EAS encoder will allow emergency officials to send messages directly to media outlets -- saving time and decreasing errors. Currently, rules have not been established that require any government agency to purchase EAS equipment, so most have not yet purchased an EAS encoder. Authorized officials without an EAS encoder can still utilize the EAS system by routing their EAS requests through a local PSAP. **(See Annex J for a detailed list of officials authorized to originate EAS alerts.)** There will be at least one PSAP in each EAS Local Area which will be equipped with an EAS encoder for alerting area broadcasters and cable operators.

C. Elected Officials

The only EAS messages initiated by any elected officials would be in response to emergency conditions which could threaten very large populations or situations which call for decisions of policy to be made. These EAS messages may regard events of civil unrest or evacuations of entire communities and may also include multiple jurisdictions. As most elected officials will not have the hardware necessary to originate an EAS message, it is necessary that they coordinate any EAS activation through their emergency management agencies.

D. Broadcast and Cable Operators

EAS activation will only be originated by broadcasters and cable operators at the request of authorized individuals in an event where primary activation methods have failed. EAS tests will be initiated by broadcasters and cable operators as required. **See Annex D for further information.**

III. FORMATS AND SCRIPTS

A. Statewide Activation

The state EOC will transmit the following message to all Minnesota broadcasters and cable operators via the State Relay network during a statewide activation:

interrupt regular programming

send EAS header code three times [with event code STA]
(1 second pause)
send EAS attention signal **[8 seconds]**
(1 second pause)

read intro. script:
"We interrupt this program because of a State of Minnesota emergency. Important information will follow."

read Governor's intro. script:
"The State of Minnesota Emergency Alert System has been activated due to a statewide emergency. Following is an announcement from the Governor of the State of Minnesota."

Governor or authorized designee gives live address **[not to exceed 1 minute, 30 seconds]**

read termination script:
"This concludes this EAS activation. All broadcast stations and cable systems may now resume normal operations."

(1 second pause)
send EAS end-of-message code three times
(1 second pause)

resume regular programming

B. Local Area Activation

Areas which have developed a specific Local Area EAS Plan (which are attached to this State EAS Plan as Annex I: Local/Regional Plans) will have their own activation formats and scripts described in their Local Area Plan. The following is a suggested activation format for general use by areas which have not yet developed an EAS plan:

interrupt regular programming

send EAS header code three times [with event code]
(1 second pause)
send EAS attention signal **[8 to 25 seconds]**
(1 second pause)

read intro. script:
"We interrupt this program to activate the (local area) Minnesota Emergency Alert System. Important information will follow."

send emergency message **[not to exceed 1 minute, 30 seconds]**

read termination script:
"This concludes this EAS activation. All broadcast stations and cable systems may now resume normal operations."

(1 second pause)
send EAS end-of-message code three times
(1 second pause)

resume regular programming

I. OVERVIEW OF EVENT CODES

Whether used under the authority of the State EAS Plan or any of the Local Area EAS Plans, the following are the only Event Codes to be used in the state of Minnesota by anyone for any purpose. No codes may be added with being pre-approved by the Minnesota EAS Team (MnEAST) and the Federal Communications Commission (FCC).

An EAS notification is sent from an origination point in the form shown in the following example:

[preamble]
ZCZC-ORG-EEE-PSSCCC+TTTT-JJJHHMM-LLLLLLLL
[attention signal]

aural, visual or text message

NNNN

Every notification sent will look similar to this. Here is a detailed description of the form shown above:

[preamble]	This is an electronic signal which clears the system. It is automatically sent by the Encoder.
ZCZC	Start of the ASCII code. This is automatically sent by the Encoder.
ORG	This is the Originator Code. This code is preset once by the encoder user, then sent automatically by the Encoder. **See Section II. in this annex for a list of Originator Codes.**
EEE	This is the Event Code. This code is determined by the originator each time an alert is sent. **See Section III. in this annex for a list of Event Codes.**
PSSCCC	This is the County Location Code. This code is determined by the originator each time an alert is sent. **See Section IV. in this annex for a list of County Location Codes.**
TTTT	This is duration time of the alert. This time is determined by the originator each time an alert is sent.
JJJHHMM	Date and Time of Day that the notification is originated. This information is automatically sent by the Encoder.
LLLLLLLL	The "L-Code". This is an 8-character ID number which identifies the originator of the EAS notification. This number is preset once by the encoder user, then sent automatically by the Encoder. **See Section V. in this annex for the format to by followed by all users in constructing their "L-Code".**
[attention signal]	Must be sent if aural, visual, or text message is sent.
aural, visual or text message	This is where the alert message is inserted into the transmission.
NNNN	This is the End-Of-Message Code. This electronic signal clears the system again, similar to the preamble. It is automatically sent by the encoder when

the End-Of-Message sequence is initiated. It can also be initiated manually at the end of every EAS alert.

Example of a complete message with codes:

ZCZC-WXR-TOR-527005-1345-1351308-KMPX/NWS [attention signal] [msg] NNNN

II. ORIGINATOR CODES

Originator Codes indicate who originated the EAS notification being sent. The following are the only Originator Codes to be used in the state of Minnesota:

WXR	National Weather Service use only.
CIV	To be used by Sheriffs, PSAPs, Minnesota Division of Emergency Management Duty Officer, local emergency management and all other authorized civil agencies.
EAS	To be used by all broadcasters and cable operators.

III. EVENT CODES

FCC-mandated codes

These event codes have been mandated for use by the FCC:

National Notifications

Emergency Action Notification	EAN
Emergency Action Termination	EAT
National Information Center	NIC

Emergency Management

Administrative Message	ADR
Evacuation Immediate	EVI
Civil Emergency Message	CEM**
Practice/Demo Warning	DMO

(** Emergency Management will use CEM for weather-related alerts.)

Testing

National Periodic Test	NPT
Required Monthly Test	RMT
Required Weekly Test	RWT

National Weather Service ONLY Notification Codes

Blizzard Warning	BZW
Flash Flood Statement	FFS

Flash Flood Warning	FFW
Flash Flood Watch	FFA
Flood Statement	FLS
Flood Warning	FLW
Flood Watch	FLA
High Wind Warning	HWW
High Wind Watch	HWA
Severe Thunderstorm Warning	SVR
Severe Thunderstorm Watch	SVA
Severe Weather Statement	SVS
Special Weather Statement	SPS
Tornado Warning	TOR
Tornado Watch	TOA
Winter Storm Warning	WSW
Winter Storm Watch	WSA

IV. MINNESOTA COUNTY LOCATION CODES

A. Community-specific codes

The first digit "P" (of the header code section "PSSCCC") can be used to indicate one-ninth of the county code it precedes, allowing the originator to pinpoint an emergency within a portion of a county. The following pattern is suggested:

1 = Northwest	6 = East Central
2 = North Central	7 = Southwest
3 = Northeast	8 = South Central
4 = West Central	9 = Southeast
5 = Central	0 = entire county

B. FIPS codes

The remaining 5 digits ("SSCCC") or "FIPS codes," indicate the state of Minnesota (27) and the county, as listed below by operational area:

Northwest EAS Area

Becker	27005
Beltrami	27007
Clay	27027
Clearwater	27029
Hubbard	27057
Kittson	27069
Lake of the Woods	27077
Mahnomen	27087
Marshall	27089
Norman	27107
Pennington	27113
Polk	27119
Red Lake	27125
Roseau	27135

Northeast EAS Area

Aitkin	27001
Carlton	27017
Cass	27021
Cook	27031
Crow Wing	27035
Itasca	27061
Koochiching	27071
Lake	27075
Pine	27115
St.Louis	27137

West Central EAS Area

Benton	27009
Big Stone	27011
Douglas	27041
Grant	27051
Kandiyohi	27067
Meeker	27093
Mille Lacs	27095
Morrison	27097
Otter Tail	27111
Pope	27121
Stearns	27145
Stevens	27149
Swift	27151
Todd	27153
Traverse	27155
Wadena	27159
Wilkin	27167

East Central (Metropolitan) EAS Area

Anoka	27003
Carver	27019
Chisago	27025
Dakota	27037
Goodhue	27049
Hennepin	27053
Isanti	27059
Kanabec	27065
Ramsey	27123
Scott	27139
Sherburne	27141
Washington	27163
Wright	27171

Southwest EAS Area

Brown	27015
Chippewa	27023

Cottonwood	27033
Jackson	27063
Lac Qui Parle	27073
Lincoln	27081
Lyon	27083
McLeod	27085
Martin	27091
Murray	27101
Nobles	27105
Pipestone	27117
Redwood	27127
Renville	27129
Rock	27133
Sibley	27143
Watonwan	27165
Yellow Medicine	27173

Southeast EAS Area

Blue Earth	27013
Dodge	27039
Faribault	27043
Fillmore	27045
Freeborn	27047
Houston	27055
LeSueur	27079
Mower	27099
Nicollet	27103
Olmsted	27109
Rice	27131
Steele	27147
Wabasha	27157
Waseca	27161
Winona	27169

V. L-CODE FORMATS

The L-Code is an 8-character code that is affixed to every EAS message originated or re-transmitted by every EAS encoder. The code identifies the particular broadcaster, cable operator, weather service office, or civil authority operating that encoder. L-Code identifications must adhere to the following formats. (No deviation from these formats is allowed since using certain other characters would cause an error in the system.)

A. Broadcasters:

Single Station examples: “WXXX(FM)” or “WXXX(TV)”

Two Stations examples: “WXXXWYYY” or “KAAAWBBB”

B. Cable Operators:

Cable systems use “Community Identification Numbers”. example: MNXXXX

C. National Weather Service Offices:

All offices use the call letters for that station, followed by "/NWS". (Note: The SAME software program will automatically insert the backslash into the fifth position in the eight-unit code.)

The following L-codes will be used:

Minneapolis/St. Paul	KMPX/NWS
Duluth	KDLH/NWS
Fargo/Grand Forks, ND	KFGF/NWS
Aberdeen, SD	KABR/NWS
LaCrosse, WI	KARX/NWS

D. Civil Authorities:

This code uses three components in constructing its 8-character code.

1. Four characters representing the first four letters in the jurisdictions name. Example: "MORR" for Morrison County.

2. Two character abbreviation for the type of jurisdiction.

County	CO
City	CY
Municipality	MY
Town	TN
Township	TP
Village	VL

3. Two character abbreviation for the type of agency.

Emergency Management	EM
Emergency Services	ES
Fire Department	FD
Police Department	PD
Sheriff	SH
Traffic Authority	TA

[Exception: Military groups will use: U.S.ARMY, U.S.NAVY, AIRFORCE, U.S.M.C, and U.S.C.G.]

Here are a few examples of a properly constructed L-Code:

Cass County Sheriff	CASSCOSH
City of Rochester Police Department	ROCHCYPD
Village of Grey Eagle Fire Department	GREYVLFD
Ravenna Township Emergency Management	RAVETPEM

I. OVERVIEW

This section is provided to aid users of the EAS, primarily broadcasters and cable operators, in programming the event codes, county-location codes, and modes of operation into their EAS decoder. EAS equipment may be programmed to respond to different types of alerts in different ways. These determinations are made depending on how these codes and settings are configured in the equipment. The information below can also be of value to emergency services personnel who are using the decoder in their EAS set-up.

II. MODES OF OPERATION

All EAS decoders are capable of manual and automatic operation.

A. Manual Operation

On this setting, the EAS equipment will only notify the user of incoming EAS alerts for which it has been pre-programmed. The operator must push a button to cause the alert to be retransmitted via the station/cable system.

B. Automatic Operation

This type of operation would normally be used with a program interrupt connection on the EAS unit. On-air audio and/or video is "looped through" the EAS unit so that the unit can interrupt the audio/video when necessary. In automatic operation, when the decoder receives an alert for which it has been programmed, it immediately interrupts regular programming to transmit the EAS alert.

C. Custom Operation Modes

The EAS equipment may also be programmed to respond in different modes to different alerts. For instance, it can be programmed to respond manually for all weather watches and automatically for all weather warnings. The Required Monthly Test (RMT), which must be re-transmitted within 15 minutes of receipt, could be programmed for automatic to prevent a violation of FCC rules.

III. COUNTY-LOCATION CODES

There are alerts of certain events which broadcasters and cable operators will receive from the County of License that must be programmed into the EAS equipment. The operator has the option of programming certain location-codes so that the equipment will receive alerts for a particular area. Or, the EAS equipment may be programmed to notify the operator in manual mode of any EAS alert received from the County of License. This way all possible events do not have to be programmed separately.

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IV. PROGRAM SETTINGS

The following are suggestions for lists of events that may be entered into the EAS decoder. (Actual event codes used and their operational modes will vary, depending upon local needs.)

EVENT CODE	*EVENT DESCRIPTION*	*COUNTY CODE TO ENTER*	*RECOMMENDED OPERATION MODE*
"EAN"	National EAS Activation	n/a	Automatic
"EAT"	National EAS Termination	n/a	Automatic
"NIC"	National Information Center	n/a	Manual
"RMT"	Required Monthly Test	statewide	Automatic (if unattended)
"RWT"	Required Weekly Test	County of License	Manual
"TOR"	Tornado Warning	all affected Local Area counties	Automatic
"FFW"	Flash Flood Warning	all affected Local Area counties	Automatic
"CEW"	Civil Emergency Warning	all affected Local Area counties	Manual
"STA"	State Priority Activation	entire State of Minnesota	Manual
"LAA"	Local Area Priority Activation	all Local Area counties	Manual
"IPW"	Industrial Plant Warning*	all affected Local Area counties	Automatic
"NUW"	Nuclear Plant Warning*	all affected Local Area counties	Automatic
"____"	any alert received	all affected Local Area counties	Manual

* if applicable

I. OVERVIEW OF TESTING THE EAS

The following requirements for both the Required Weekly Test (RWT) and the Required Monthly Test (RMT) apply to all broadcasters and cable operators. Even stations that have elected not to participate in local EAS notifications must still rebroadcast verbatim the RMT every month within 15 minutes of its receipt.

There are two exceptions for broadcasters to these rules: 1) Class "D" FM (power output 10 watts or less) and LPTV (low-power TV) stations need not have an EAS *encoder*, but they must have a *decoder*. These stations are exempt from running the RWT digital code test, however, they must retransmit the RMT minus the header codes and attention signal. In addition, LPTV stations must present all EAS information visually, just as all other television stations must do. 2) The second exception is that FM translator and TV translator stations are not required to have *any* EAS equipment.

Wired and Wireless Cable systems:

Wired and Wireless Cable systems serving fewer than 5,000 subscribers from a headend must either provide the national level EAS message on all programmed channels or cause all channels to flash for the duration of the EAS message including the required testing by October 1, 2002.

Wired Cable systems serving more than 5,000 subscribers from a headend must provide the national level EAS message on all programmed including the required testing by October 1, 2002.

Wireless Cable systems serving more than 5,000 subscribers from a headend must provide the national level EAS message on all programmed including the required testing by October 1, 2002.

Wired Cable systems serving more than 10,000 subscribers from a headend must provide the national level EAS message on all programmed including the required testing by December 31, 1998.

II. TESTING TYPES AND PROCEDURES

A. Required Weekly Test

All broadcasters and cable operators, with exception of those noted earlier, must transmit an RWT once each week at random days and times except for the week of the Required Monthly Test. There are no time-of-day restrictions for transmitting the RWT. This is a 10.5-second test consisting only of the EAS header and end-of-message codes. Reception of an RWT must be logged, but no further action is required.

B. Required Monthly Test

The RMT is to be initiated by the National Primary station, Minnesota Duty Officer, National Weather Service (NWS), or Public Safety Answering Point (PSAP) centers based on the schedule in Section III of this annex. During the designated week for this test, all other broadcasters and cable operators are to standby for this test and then re-transmit it within 15 minutes of reception. Re-transmission of the RMT within 15 minutes is an FCC requirement, not an option. (For daytime-only stations receiving a night-time RMT, this test must be re-transmitted within 15 minutes from sign-on.) Transmission of the RMT takes the place of the RWT for that week. Times should be logged in for both the receipt and re-transmission of an RMT.

Unless the station is an originating EAS source of RMT messages for the state primary (SP) or local primary (LP), all incoming information – including audio – must be retransmitted exactly as received except for the "L" code of the digital preamble.

C. Periodic National Tests

National Primary sources will conduct tests of the National EAS as appropriate.

D. EAS Activation and Special Tests

The EAS may be activated at the State or Local area level by a broadcast station or cable system in lieu of the monthly or weekly tests required by the FCC.

III. TESTING SCHEDULE

State Relay, Local Primary, PSAP centers, and the Minnesota Duty Officer need to use reasonable judgment in the scheduling of the Required Monthly Tests (RMT). Since the RMT must be re-transmitted within 15 minutes of reception, it's timing should not cause undue hardship on broadcasters by cutting into high-revenue program time. Times to be avoided include: morning, noon, evening and late-evening hours; Presidential speeches; election coverage; and major sporting events. Broadcasters and cable operators with complaints regarding the scheduling of the RMT should contact the broadcast representative on the MnEAST. **(See Annex G for contact information.)**

All Minnesota Statewide EAS RMT's will happen on the first Wednesday of the month.

All RMT start times are plus/minus two minutes for WCCO-AM and other authorized Broadcast EAS Originating stations, i.e. LP1, LP2, etc.

All RMT start times for Minnesota Duty Officer/DEM and NWS are within the 5 minute window of the times noted above.

The State Relay network will relay the state RMT at either 14:06:00 or 23:06:00 depending month.

Daytime (Odd number months) EAS RMT's schedule the following times:

State DEM & NWS Origination (when scheduled) 1:44 PM via Pt2Pt & RPU
WCCO AM Origination or relay: 1:54 PM
Statewide via MPR: 2:06PM

Night time (Even number months) EAS RMT's schedule the following times:

State DEM Origination (when scheduled) 10:44 PM via Pt2Pt & RPU
WCCO AM Origination or relay:10:54 PM
Statewide relay via MPR: 11:06PM

EAS Dates and Times

August 5 (Night Time RMT)

Origination Time: 10:54 PM
Origination Station WCCO-AM
Statewide Relay: 11:06 PM

September 2 (Day Time RMT)

Origination Time: 1:44 PM
Origination Station MN DEM via RPU 161.25MHz & Pt2Pt 155.37MHz
EC (Metro) Relay via WCCO-AM: 1:54 PM
Statewide Relay via MPR: 2:06 PM

October 7 (Night Time RMT)

Origination Time: 10:54 PM
Origination Station KNOW/KSJN-FM
Statewide Relay via MPR: 11:06 PM

November 4 (Day Time RMT)

Origination Time: 1:44 PM
Origination Station Chanhassen NWS via RPU 161.25MHz & Pt2Pt 155.37MHz
EC (Metro) Relay via WCCO-AM: 1:54 PM
Statewide Relay via MPR: 2:06 PM

December 2 (Night Time RMT)

Origination Time: 10:54 PM
Origination Station WCCO-AM
Statewide Relay via MPR: 11:06 PM

January 6 (Day Time RMT)

Origination Time: 1:44 PM
Origination Station MN DEM via RPU 161.25MHz & Pt2Pt 155.37MHz
EC (Metro) Relay via WCCO-AM: 1:54 PM
Statewide Relay via MPR: 2:06 PM

IV. TEST CODES

A. Time-Duration

The time-duration to be used in the EAS header code for all EAS tests should be 30 minutes.

B. County-Location Codes

The county-location codes used in the EAS header for all EAS tests must conform with the following guidelines:

1. State Relay stations: All tests, RWT and RMT must use the location code for the entire state of Minnesota (27000).

2. Local Primary stations: The RWT must include the location code for all counties in that LP station's local area of responsibility. To determine the counties in their local area of responsibility, LP stations should see **Annex F: Maps**.

3. PN and NN stations and cable operators: RMT tests shall be re-transmitted unchanged, except for the Location Code. The RMT will include all counties present in the original message. For the RWT originated each week by each PN and NN station and each cable operator, the county-location code should be used for the county of the broadcaster's City of License or cable operator's Community of License. Other counties in the station's/system's service area may be added at management discretion.

V. TEST FORMATS AND SCRIPTS

Required Weekly Test announcements and visual messages are optional for this test. Only the EAS digital header code is required for transmission. Log when this test is performed.

The following test scripts and formats should be used by all Minnesota broadcasters, cable operators and emergency agencies when originating EAS tests.

A. RWT

Review the FCC Handbook.

stop regular programming

announce:
"This is a test of the Emergency Alert System."

TV/Cable - insert an appropriate "slide" for video
(one-second pause)
send EAS header code three times
(one-second pause)
send EAS end-of-message code three times
(one-second pause)
resume normal programming

B. RMT

The NP station, Minnesota Duty Officer, or NWS originating this test should use the following format and script. All other broadcasters and cable operators will receive the test in this format and must re-transmit it within 15 minutes in the same format.

stop regular programming

optional intro.:

"This is a test of the (local area) Minnesota Emergency Alert System."

TV/Cable - insert an appropriate "slide" for video

(one-second pause)

send EAS header code three times [All sources must use Event Code "RMT"]

(one-second pause)

send EAS attention signal, 8 to 25 seconds in length

test script:

"This is a coordinated monthly test of the broadcast stations in your area. Equipment that can quickly warn you during emergencies is being tested. If this had been an actual emergency – such as a tornado – official messages would have followed the alert tone. This concludes this test of the Emergency Alert System."

(one-second pause)

send EAS end-of-message code three times

(one-second pause)

resume normal programming

I. OVERVIEW

Each broadcast station and cable system is required to monitor the assigned channels for inputs one (1) and two (2) on the EAS decoder that will enable relay of the national level emergency action notification (EAN) message. The lists that follow will show these required inputs plus additional inputs that will be used on the local level.

EAS Decoder Input 1 - This input is required by FCC rules.

EAS Decoder Input 2 - This input is required by FCC rules.

EAS Decoder Input 3 - local monitoring assignment

EAS Decoder Input 4 - local monitoring assignment

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City	Station	Input 1	Input 2	Input 3	Input 4
Aitkin	KKIN AM	KBPR FM 90.7	KCRB FM 88.5	--	--
Aitkin	KKIN FM	KBPR FM 90.7	KCRB FM 88.5	--	--
Brainerd	KBPR FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Brainerd	KFGI FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Brainerd	KLIZ AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Brainerd	KLIZ FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Brainerd	KTCF FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Brainerd	KVBR AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Brainerd	KVBR FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Brainerd	WJJY FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Brainerd	WWWI AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Breezy Point	KLKS FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Cloquet	WKLK AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Cloquet	WKLK FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Colleraine	KGPZ FM	WIRR FM 90.9	WSCN FM 100.5	--	--
Duluth	KBJR TV	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KDAL AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KDAL FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KDLH TV	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KDNI FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KDNW FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KKCB FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KLDJ FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KLXK FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KNLD TV	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KQDS AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KQDS FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KRBR FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KTCO FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KUMD FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KXTP AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	KZIO FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WAVC FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WDIO TV	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WDSE TV	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WDSM AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WEBC AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WIRR FM	SR-1	WSCD FM 92.9	--	--
Duluth	WIRT TV	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WNCB FM	WSCN FM 100.5	WSCD FM 92.9	--	--
Duluth	WRSR FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WSCD FM	SR-1	WIRR FM 90.9	--	--
Duluth	WSCN FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WWAX FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Duluth	WWJC AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Ely	WELY AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Ely	WELY FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Eveleth	WEVE AM	WIRR FM 90.9	WSCN FM 100.5	--	--
Eveleth	WEVE FM	WIRR FM 90.9	WSCN FM 100.5	--	--

City	Station	Input 1	Input 2	Input 3	Input 4
Grand Rapids	KAXE FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Grand Rapids	KMFY FM	KCRB FM 88.5	KNBJ FM 91.3	--	--
Grand Rapids	KOZY AM	KCRB FM 88.5	KNBJ FM 91.3	--	--
Hibbing	KADU FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Hibbing	WKKQ AM	WIRR FM 90.9	WIRN FM 92.5	NWS	--
Hibbing	WMFG AM	WIRR FM 90.9	WSCD FM 92.9	WKKQ AM	--
Hibbing	WMFG FM	WIRR FM 90.9	WSCD FM 92.9	WKKQ AM	--
Hibbing	WTBX FM	WIRR FM 90.9	WIRN FM 92.5	NWS	--
International Falls	KBHW FM	KCRB FM 88.5	KSDM FM 104.1	--	--
International Falls	KCHS AM	WIRR FM 90.9	WSCD FM 92.9	--	--
International Falls	KGHS AM	WIRR FM 90.9	WSCD FM 92.9	--	--
International Falls	KICC FM	WIRR FM 90.9	WSCD FM 92.9	--	--
International Falls	KSDM FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Pequot Lakes	KTIG FM	KBPR FM 90.7	WJJY FM 106.7	--	--
Pine City	WCMP AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Pine City	WCMP FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Virginia	WHLB AM	WIRR FM 90.9	WSCD FM 92.9	--	--
Virginia	WUSZ FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Walker	KLLZ AM	WIRR FM 90.9	WSCD FM 92.9	--	--

Minnesota Northwest Operational Area

City	Station	Input 1	Input 2	Input 3	Input 4
Ada	KRJB FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Bemidji	KAWB TV	KQMN FM 91.5	KNTN FM 102.7	--	--
Bemidji	KAWE TV	KQMN FM 91.5	KNTN FM 102.7	--	--
Bemidji	KBHP FM	KCRB FM 88.5	KNBJ FM 91.3	--	--
Bemidji	KBSB FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Bemidji	KBUN AM	KCRB FM 88.5	KNBJ FM 91.3	--	--
Bemidji	KCRB FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Bemidji	KKBJ AM	KCRB FM 88.5	KNBJ FM 91.3	--	--
Bemidji	KKBJ FM	KCRB FM 88.5	KNBJ FM 91.3	--	--
Bemidji	KLLZ FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Bemidji	KNBJ FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Bemidji	WBJI FM	KCRB FM 88.5	KNBJ FM 91.3	--	--
Crookston	KQHT FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Crookston	KROX AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Detroit Lakes	KDLM AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Detroit Lakes	KKDL FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Detroit Lakes	KRCQ FM	KCCM FM 91.1	KCCD FM 90.3	--	--
East Grand Forks	KCNN AM	KQMN FM 91.5	KNTN FM 102.7	--	--
East Grand Forks	KYCK FM	KQMN FM 91.5	KNTN FM 102.7	--	--
East Grand Forks	KZLT FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Fargo, ND	KLTA FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Fosston	KKCQ AM	KQMN FM 91.5	KCRB FM 88.5	--	--
Fosston	KKCQ FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Fosston	KKEQ FM	KQMN FM 91.5	KCRB FM 88.5	--	--
Moorhead	KCCD FM	KQMN FM 91.5	KNTN FM 102.7	--	--

City	Station	Input 1	Input 2	Input 3	Input 4
Moorhead	KCCM FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Moorhead	KQFN AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Moorhead	KQWB AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Moorhead	KVOX AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Moorhead	KVOX FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Park Rapids	KDKK FM	KBPR FM 90.7	KCRB FM 88.5	--	--
Park Rapids	KPRM AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Park Rapids	KPRM FM	KBPR FM 90.7	KCRB FM 88.5	--	--
Roseau	KCAJ FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Roseau	KRWB AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Thief River Falls	KKAQ AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Thief River Falls	KKDQ FM	WIRR FM 90.9	WSCD FM 92.9	--	--
Thief River Falls	KKOQ FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Thief River Falls	KSNR FM	KQMN FM 91.5	KNTN FM 102.7	--	--
Thief River Falls	KSRQ FM	KQMN FM 91.5	KTRF AM 1230	--	--
Thief River Falls	KTRF AM	KQMN FM 91.5	KNTN FM 102.7	--	--
Warroad	KKWQ FM	KQMN FM 91.5	KNTN FM 102.7	--	--

Minnesota West Central Operational Area

City	Station	Input 1	Input 2	Input 3	Input 4
Albany	KASM AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Albany	KDDG FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Alexandria	KCCO TV	KSJR FM 90.1	KNSR FM 88.9	--	--
Alexandria	KCCW TV	KSJR FM 90.1	KNSR FM 88.9	--	--
Alexandria	KIKV FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Alexandria	KRWF TV	KSJR FM 90.1	KNSR FM 88.9	--	--
Alexandria	KSAX TV	KNSR FM 88.9	KSJR FM 90.1	--	--
Alexandria	KSTQ FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Alexandria	KXRA AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Alexandria	KXRA FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Atwater	KYRS FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Benson	KSCR AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Benson	KSCR FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Big Lake	KXLI TV	WCCO AM 830	KSJN FM 99.5	KEC 65	--
Breckenridge	KBMW AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Breckenridge	KGWB FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Browerville	KXDL FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Cold Springs	KMXK FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Collegeville	KJNB FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Collegeville	KNSR FM	SR-1	KSJR FM 90.1	--	--
Collegeville	KSJR FM	SR-1	KNSR FM 88.9	--	--
Fergus Falls	KBRF AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Fergus Falls	KJJK AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Fergus Falls	KJJK FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Fergus Falls	KZCR FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Glenwood	KMGK FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Litchfield	KLFD AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Little Falls	KFML FM	KSJR FM 90.1	KNSR FM 88.9	--	--

City	Station	Input 1	Input 2	Input 3	Input 4
Little Falls	KLTF AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Little Falls	WYRQ FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Long Prairie	KEYL AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Morris	KKOK FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Morris	KMRS AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Morris	KUMM FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Ortonville	KAHF FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Ortonville	KCGN FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Ortonville	KDIO AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Osakis	KBHL FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Pelican Rapids	KBOT FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Perham	KPRW FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Princeton	WQPM AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Princeton	WQPM FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Sauk Centre	KMSR FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Sauk Rapids	WHMH FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Sauk Rapids	WVAL AM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Cloud	KCFB FM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Cloud	KCLD FM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Cloud	KKSR FM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Cloud	KLZZ AM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Cloud	KVSC FM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Cloud	KXSS AM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Cloud	WJON AM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Cloud	WWJO FM	KSJR FM 90.1	KNSR FM 88.9	--	--
St. Joseph	KKJM FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Staples	KNSP AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Wadena	KSKK FM	KBOR FM 90.7	KCRB FM 88.5	--	--
Wadena	KWAD AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Willmar	KDJS AM	WCCO AM 830	KSJR FM 90.1	162.400 Mhz	--
Willmar	KDJS FM	WCCO AM 830	KSJR FM 90.1	162.400 Mhz	--
Willmar	KQIC FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Willmar	KWLM AM	KSJR FM 90.1	KNSR FM 88.9	--	--

Minnesota East Central Operational Area

City	Station	Input 1	Input 2	Input 3	Input 4
Buffalo	KRWC AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Cambridge	WREV FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Eden Prairie	KMJZ FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Eden Prairie	KMSP TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Eden Prairie	KSGS AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Forest Lake	WLKX FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Golden Valley	KDIZ FM	WCCO AM 830	KSJN FM 99.5	KEC 65	--
Golden Valley	KEGE AM	WCCO AM 830	KSJN FM 99.5	KEC 65	--
Golden Valley	KQRS FM	WCCO AM 830	KSJN FM 99.5	KEC 65	--
Hastings	KDWA AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Lakeland	WDGY AM	WCCO AM 830	KSJN FM 99.5	KEC 65	--
Lakeland	WMIN AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--

City	Station	Input 1	Input 2	Input 3	Input 4
Minneapolis	KARE TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KBEM FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KCFE FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KDWB FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KDXL FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KEEY FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KEGE FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KFAI FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KFAN AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KKMS AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KLBB AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KMOJ FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KNOF FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KNOW FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KQQL FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KQRS AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KSJN FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KTCA TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KTCI TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KTCJ AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KTCZ FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KUOM AM	WCCO AM 830	KSJN FM 99.5	KEC 65	--
Minneapolis	KVBM TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	KYCR AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WBOB FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WCCO AM	PEP	KNOW FM 91.1	KEC 65	--
Minneapolis	WCCO TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WCTS AM	WCCO AM 830	KSJN FM 99.5	KEC 65	--
Minneapolis	WCTS FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WFTC TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WLOL AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WLTE FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WMCM FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WMNN AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Minneapolis	WWTC AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Monticello	KMOM AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Mora	KBEK FM	WCCO AM 830	KNOW FM 91.1	--	--
New Prague	KCHK AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
New Prague	KCHK FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Northfield	KRLX FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Northfield	KYMN AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Northfield	WCAL FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Red Wing	KCUE AM	WCCO AM 830	KNOW FM 91.1	--	--
Red Wing	KWNG FM	WCCO AM 830	KNOW FM 91.1	--	--
Roseville	KTIS AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Roseville	KTIS FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Shakopee	KKCM AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
St. Paul	KLGT TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
St. Paul	KREV FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
St. Paul	KSTP AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
St. Paul	KSTP FM	WCCO AM 830	KNOW FM 91.1	KEC 65	--

City	Station	Input 1	Input 2	Input 3	Input 4
St. Paul	KSTP TV	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Stillwater	WIMN AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--
Watertown	KWOM AM	WCCO AM 830	KNOW FM 91.1	KEC 65	--

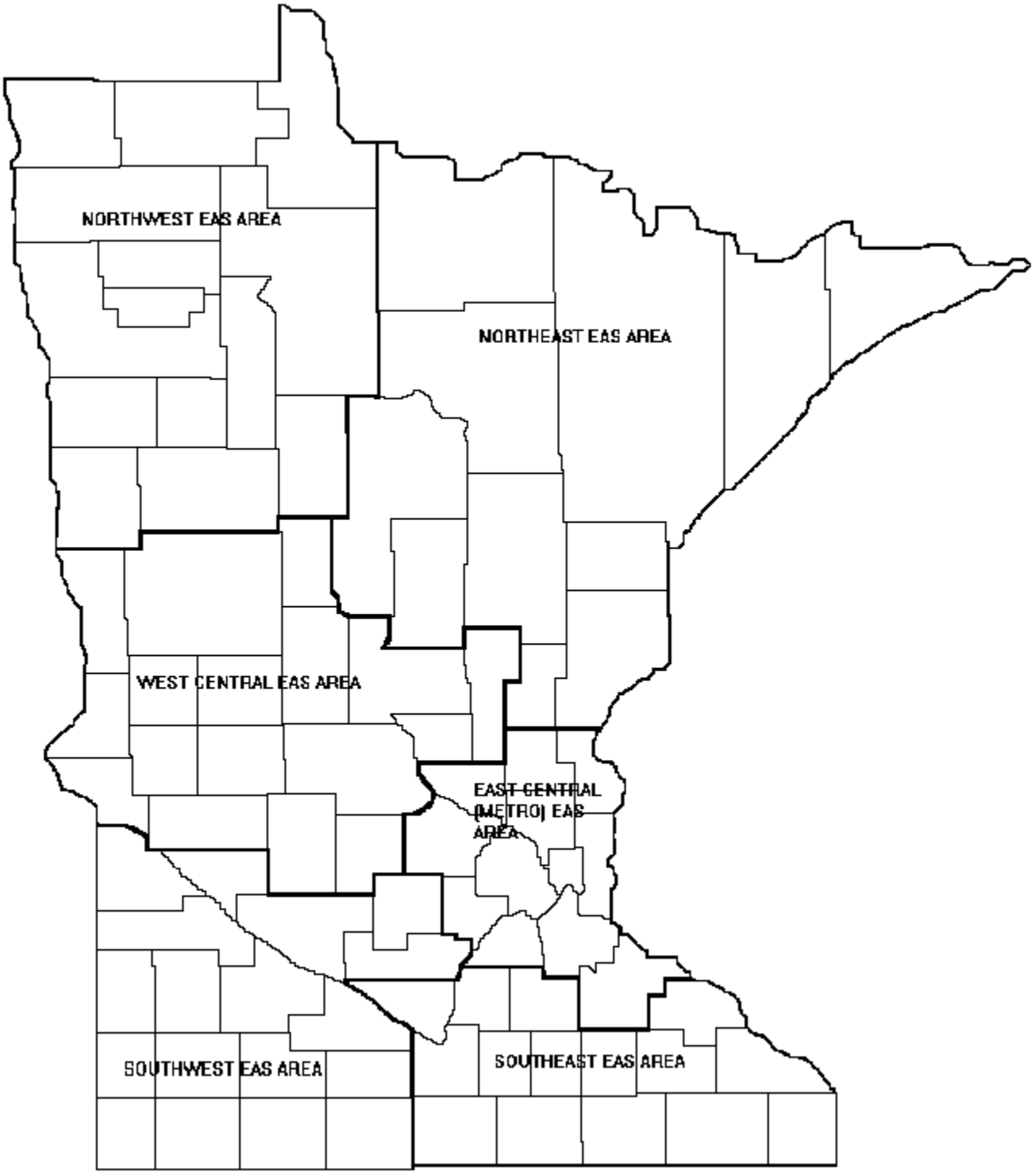
Minnesota Southwest Operational Area

City	Station	Input 1	Input 2	Input 3	Input 4
Appleton	KWCM TV	KRSW FM 91.7	KNCM FM 88.5	--	--
Chandler	KSMN TV	KRSW FM 91.7	KNCM FM 88.5	--	--
Fairmont	KFMC FM	KRSW FM 91.7	KGAC FM 90.5	--	--
Fairmont	KSUM AM	KRSW FM 91.7	KNSW FM 91.7	--	--
Glencoe	KARP FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Granite Falls	KKRC FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Hutchinson	KDUZ AM	KSJR FM 90.1	KNSR FM 88.9	--	--
Hutchinson	KKJR FM	KSJR FM 90.1	KNSR FM 88.9	--	--
Jackson	KKOJ AM	KRSW FM 91.7	KNSW FM 91.7	--	--
Jackson	KRAQ FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Luverne	KLQL FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Luverne	KQAD FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Madison	KLQP FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Marshall	KARL FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Marshall	KBJJ FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Marshall	KKCK FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Marshall	KMHL AM	KRSW FM 91.7	KNSW FM 91.7	--	--
Montevideo	KDMA AM	KRSW FM 91.7	KNSW FM 91.7	--	--
Montevideo	KMGM FM	KRSW FM 91.7	KNSW FM 91.7	--	--
New Ulm	KNUJ AM	KRSW FM 91.7	KNSW FM 91.7	--	--
Olivia	KOLV FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Pipestone	KISD FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Pipestone	KLOH AM	KRSW FM 91.7	KNSW FM 91.7	--	--
Redwood Falls	KLGR AM	KNSW FM 91.7	KRSW FM 91.7	--	--
Redwood Falls	KLGR FM	KNSW FM 91.7	KRSW FM 91.7	--	--
Slayton	KJOE FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Sleepy Eye	KNUJ FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Springfield	KNSG FM	KRSW FM 91.7	KNSW FM 91.7	--	--
St. James	KXAC FM	KRSW FM 91.7	KNSW FM 91.7	--	--
St. James	KXAX FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Windom	KDOM AM	KNSW FM 91.7	KRSW FM 91.7	--	--
Windom	KDOM FM	KNSW FM 91.7	KRSW FM 91.7	--	--
Worthington	KITN FM	KRSW FM 91.7	KNSW FM 91.7	--	--
Worthington	KRSW FM	SR-1	KNSW FM 91.7	--	--
Worthington	KWOA AM	WCCO AM 830	KRSW FM 91.7	--	--
Worthington	KWOA FM	WCCO AM 830	KRSW FM 91.7	--	--

Minnesota Southeast Operational Area

City	Station	Input 1	Input 2	Input 3	Input 4
Albert Lea	KATE AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Albert Lea	KCPI FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Albert Lea	KQPR FM	WCCO AM 830	KNOW FM 91.1	NWS	--
Austin	KAAL TV	WCCO AM 830	KLSE FM 91.7	--	--
Austin	KAUS AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Austin	KAUS FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Austin	KMSK FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Austin	KNFX AM	WCCO AM 830	KZSE FM 90.7	NWS	Olmsted EOC
Austin	KSMQ TV	KLSE FM 91.7	KGAC FM 90.5	--	--
Blue Earth	KBEW AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Blue Earth	KBEW FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Blue Earth	KJLY FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Caledonia	KSOF FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Faribault	KDHL AM	WCCO AM 830	KNOW FM 91.1	NWS	--
Faribault	KQCL FM	WCCO AM 830	KNOW FM 91.1	NWS	--
LaCrescent	KQEG FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Lake City	KMFX FM	WCCO AM 830	KZSE FM 90.7	NWS	Olmsted EOC
Mankato	KDOG FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Mankato	KEEZ FM	KGAC FM 90.5	KZSE FM 90.7	--	--
Mankato	KEYC TV	KLSE FM 91.7	KZSE FM 90.7	--	--
Mankato	KMSU FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Mankato	KSMU FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Mankato	KTOE AM	KGAC FM 90.5	KNGA FM 91.5	--	--
Mankato	KXLP FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Mankato	KYSM AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Mankato	KYSM FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Owatonna	KOWZ FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Owatonna	KRFO AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Owatonna	KRFO FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Preston	KFIL AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Preston	KFIL FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KFSI FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KLSE FM	SR-1	KZSE FM 90.7	--	--
Rochester	KNXR FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KOLM AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KRCH FM	WCCO AM 830	KZSE FM 90.7	NWS	Olmsted EOC
Rochester	KROC AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KROC FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KTTC TV	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KWEB AM	WCCO AM 830	KZSE FM 90.7	NWS	Olmsted EOC
Rochester	KWWK FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KXLT TV	KLSE FM 91.7	KZSE FM 90.7	--	--
Rochester	KZSE FM	SR-1	KZSE FM 90.7	--	--
Spring Grove	KQYB FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Spring Valley	KNFX FM	WCCO AM 830	KZSE FM 90.7	NWS	Olmsted EOC
Spring Valley	KVGO FM	KLSE FM 91.7	KZSE FM 90.7	--	--
St. Peter	KGAC FM	KLSE FM 91.7	KZSE FM 90.7	--	--
St. Peter	KNGA FM	KLSE FM 91.7	KZSE FM 90.7	--	--
St. Peter	KRBI AM	KLSE FM 91.7	KZSE FM 90.7	--	--

City	Station	Input 1	Input 2	Input 3	Input 4
St. Peter	KRBI FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Stewartville	KYBA FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Wabasha	KMFX AM	WCCO AM 830	KLSE FM 91.7	NWS	Olmsted EOC
Wadena	KKWS FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Waseca	KOWO AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Waseca	KRUE FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Winona	KAGE AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Winona	KAGE FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Winona	KHME FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Winona	KQAL FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Winona	KSMR FM	KLSE FM 91.7	KZSE FM 90.7	--	--
Winona	KWNO AM	KLSE FM 91.7	KZSE FM 90.7	--	--
Winona	KWNO FM	KLSE FM 91.7	KZSE FM 90.7	--	--


NORTHWEST EAS AREA
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WEST CENTRAL EAS AREA
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OPEN

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GLOSSARY and ACRONYMS

activation	The initiation of the EAS by transmission of the EAS codes.
ASCII	A standard set of text characters with numerical equivalents.
attention signal	An audio alert, usually eight seconds long, of two tones: 853 and 960 Hz.
Audio Frequency Shift Keying (AFSK)	A digital modulation technique that uses two shifting audio frequencies to transmit binary data.
authenticator word list	A list of words that federal officials send prior to official EAS national activation; used to substantiate the information being sent.
authorization	The official permission, given by the FCC, for a broadcast station to go off the air during a national level activation of the EAS.
automatic interruption	The automatic encoding and transmission of EAS codes for preselected events.
baud rate	The speed of data transmitted, equal to the number of elements sent per second (equal to bits per second, if the element is a bit).
bit rate	The speed of binary data transmitted, equal to the number of digital bits sent per second.
certification	An equipment authorization issued by the FCC, based on representations and test data submitted by the applicant for equipment designated to be operated without individual license under Parts 15 and 18 of the rules.
Class D FM station	A station whose output power is 10 watts or less.
Closed Circuit Test (CCT)	A test of the EAN network from FEMA to the EAN program participants, and ending at the facilities of the EAN participants' affiliates.
Direct Broadcast Satellite	A service intended to deliver satellite signals directly to consumers using small, relatively-inexpensive receive stations.
decoder (EAS)	An electronic device used by EAS participants to receive EAS alerts and to translate the EAS codes into a visual message.
decoder (two-tone)	An electronic device that alerts operators to the reception of the two-tone signal.
EAN network	The interconnection of the federal government with national networks and program suppliers used to disseminate the EAN messages.
Emergency Action	

Notification (EAN)	The message for national EAS activation.
Emergency Action Termination (EAT)	The message for national EAS termination.
encoder (EAS)	An electronic device used by EAS participants to originate EAS alerts by creating the EAS codes for transmission to other participants and the public.
encoder (two-tone)	An electronic device that produces the two-tone signal.
EOM code	In ASCII form "NNNN", this burst of data is sent three times to signify the end of an EAS message and EAS activation.
event code	A three character ACSII code in the EAS headers that denotes the type or cause of emergency event.
Federal Emergency Management Agency (FEMA)	One of three federal agencies that administers EAS.
FIPS code	A five character ASCII code in the EAS headers that represents those counties affected by an EAS activation, as defined by the Federal Information Processing System that assigns each state and territory with their respective counties a five digit number.
header code	A single string of intelligent digital EAS ASCII data that includes the originator, event, location, time period, and other basic information concerning an emergency; three header codes precede the voice warning message.
Julian calendar	A method of specifying the date by the number of days which have passed since the first day of January in a year.
key source	A source which is central to the dissemination of emergency alerts and information, such as an NP, SP, SR, or LP broadcast stations.
Local Primary (LP)	A key source within a local area that is the primary source of EAS programming for that local area.
location code	An ASCII code in an EAS header that specifies the location of an emergency utilizing the five character FIPS code of a state and county, and a sixth character to designate nine divisions of a county.
Low Power Television (LPTV)	A television signal translator station which also originates programming.
mapbook	A list of broadcast and cable systems and their EAS designation delineated by state and local area for use by other stations to determine the best source of EAS monitoring; an FCC-required attachment to every state plan.

mark frequency	The audio frequency of AFSK modulation that corresponds to a digital bit of one (1); the mark frequency of EAS codes is 6250/3 Hz, or approximately 2083.33 Hz.
monitoring assignment	The off-air broadcast or cable sources of EAS activation and programming as given in the FCC mapbook and the state plans.
National Control Point procedures	Those national EAS procedures used only by national networks and program suppliers.
National Information Center (NIC)	A source of official federal government information.
National Oceanic and Atmospheric Administration (NOAA)	One of three federal agencies that participate in EAS.
National Periodic Test (NPT)	Tests of National Primary sources.
National Primary (NP)	A primary source of Presidential or other national EAS activation and programming, including broadcast stations involved with the PEP system and EAN networks.
National Weather Service (NWS)	An operation of NOAA that is directly responsible for issuing local weather-related emergency alerts and warnings in addition to daily forecasts and other weather activities.
NOAA Weather Radio (NWR)	A service of the National Weather Service that provides to a local area continuous broadcasts of the latest weather information and any weather-related emergency warnings using one of seven VHF radio channels.
Non-participating National (NN)	An EAS source (usually a broadcast station) that has elected not to participate in the national-level EAS and removes its carrier from the air if a national-level activation occurs.
operating handbook	A document issued by the FCC that instructs broadcast station and cable personnel of the actions they must take during an activation of EAS.
operator interruption	The transmission of an EAS activation which has been manually initiated by broadcast station or cable system personnel.

originator code	A three character ASCII code in an EAS header which denotes the source of an activation.
Participating National (PN)	Broadcast stations, cable systems, or MDS stations which monitor primary sources of EAS programming and directly feed emergency alerts to the public.
pre-selected code	An EAS event which the operator of EAS equipment has chosen to be automatically encoded and re-transmitted upon reception.
Primary Entry Point (PEP)	Key broadcast stations throughout the U.S. which together can provide national emergency information.
protocol	A standard set of guidelines by which digital information is encoded and decoded, including the common code structure, the character set used, the sequence and timing of codes, and modulation technique used for radio transmission.
program priorities	The precedence of the information that must be transmitted during an EAS activation, namely national, local and state activation, in that order.
Public Safety Answering Point (PSAP)	A central dispatching point for emergency responders. This may be for a community, a city, or an entire county.
Radio Broadcast Data System (RBDS)	A defined protocol for data that is transmitted on the 57 kHz sub-carrier of FM radio broadcast stations utilized mainly by consumer devices equipped to receive it.
Required Monthly Test (RMT)	A coordinated monthly test of EAS operations involving the full receiving and transmission of EAS codes, attention signal, EAS test programming, and EAS end-of-message codes.
Required Weekly Test (RWT)	An independent weekly test of EAS equipment only involving the decoding and encoding of EAS header codes and end-of-message codes.
RS-232	A common interface standard which specifies the mechanical connection, electrical signals, and the function of the signals carried across the interface.
space frequency	The audio frequency of AFSK modulation that corresponds to a digital bit of zero (0); the space frequency of EAS codes is 6250/4 Hz, or 1562.5 Hz.
state/local plan	A document that details monitoring assignments, actions to be taken in emergency activation, and other guidance for broadcasters and cable personnel in use of the EAS.
State Primary (SP)	A primary source of EAS state programming which can originate with a Governor or designated representative, such as a state emergency operations officer.

State Relay (SR)	An entity which receives and retransmits EAS activation in a State Relay Network to assist bringing a state activation to all Local Areas of a state.
state relay network	A system of facilities used to distribute State EAS activation and programming across a state.
Sub-carrier	An inaudible portion of the broadcast signal that is added to the program signal of the FM or TV sound. These can include the FM 57 kHz, 67 kHz, 69 kHz, and 92 kHz and the TV Subsidiary Communications Services.
subsidiary communications services	A sub-carrier of television and FM stations providing a second audio programming source.
type acceptance	An equipment authorization issued by the FCC based on test data submitted by the applicant for equipment to be used pursuant to a station authorization.
UTC	Coordinated Universal Time, the world-wide common time standard that is used in EAS headers for time stamp. (The UTC is the same as Greenwich Mean Time or Zulu time.)
valid code	An EAS header which has been matched bit-for-bit with one of two other received headers, thereby checked for validity.
WRSAME	Acronym for “Weather Radio Specific Area Message Encoder” -- a device used by the National Weather Service to broadcast WRSAME data on the National Weather Radio for day-to-day forecasts and weather-related emergency announcements.

I. OVERVIEW

The plans written by the local EAS operational areas within Minnesota describe procedures and details for using EAS in those areas. In conjunction with the statewide EAS plan, these plans form the EAS in Minnesota. The following plans have been created and approved by local EAS teams and reviewed by the Minnesota EAS Team. Once all local plans are received, they will be attached to this annex of the statewide plan.

II. LOCAL EAS PLANS

The following local EAS plans will be attached to this annex as a part of the Minnesota EAS Statewide Plan:

A. Northwest EAS Area Plan

This includes the counties of: Becker, Beltrami, Clay, Clearwater, Hubbard, Kittson, Lake of the Woods, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake, and Roseau.

B. Northeast EAS Area Plan

This includes the counties of: Aitkin, Carlton, Cass, Cook, Crow Wing, Itasca, Koochiching, Lake, Pine, and St. Louis.

C. West Central EAS Area Plan

This includes the counties of: Benton, Big Stone, Douglas, Grant, Kandiyohi, Meeker, Mille Lacs, Morrison, Otter Tail, Pope, Stearns, Stevens, Swift, Todd, Traverse, Wadena, and Wilkin.

D. East Central (Metro) EAS Area Plan

This includes the counties of: Anoka, Carver, Chisago, Dakota, Goodhue, Hennepin, Isanti, Kanabec, Ramsey, Scott, Sherburne, Washington, and Wright.

E. Southwest EAS Area Plan

This includes the couties of: Brown, Chippewa, Cottonwood, Jackson, Lac Qui Parle, Lincoln, Lyon, McLeod, Martin, Murray, Nobles, Pipestone, Redwood, Renville, Rock, Sibley, Watonwan, and Yellow Medicine.

F. Southeast EAS Area Plan

This includes the counties of: Blue Earth, Dodge, Faribault, Fillmore, Freeborn, Houston, LeSueur, Mower, Nicollet, Olmsted, Rice, Steele, Wabasha, Waseca, and Winona.

(Local/Regional EAS plans will be inserted here upon completion.)

I. NATIONAL LEVEL EAS ALERTS

WCCO-AM 830 Khz
Minneapolis/St. Paul

II. STATE LEVEL EAS ALERTS

Minnesota Duty Officer,
Minnesota Division of Emergency Management
(State Emergency Operations Center)
St. Paul

III. LOCAL/REGIONAL WEATHER SAME ALERTS (SAME alerts are compatible with EAS)

National Weather Service	Chanhassen (Minneapolis/St. Paul)
National Weather Service	Duluth
National Weather Service	Fargo, ND
National Weather Service	Aberdeen, SD
National Weather Service	Sioux Falls, SD
National Weather Service	LaCrosse, WI

IV. LOCAL LEVEL EAS ALERTS

PSAPs and Chief Elected Officials (as detailed in the local operational area plan.)

MEMORANDUM OF UNDERSTANDING BETWEEN MINNESOTA PUBLIC RADIO (MPR) AND THE MINNESOTA EMERGENCY ALERT SYSTEM TEAM (MnEAST)

Memorandum of Understanding

Introduction

The Emergency Alert System (EAS) was designed to provide citizens with timely emergency information with regard to major emergencies and disasters, both natural and technological, which pose significant threat to health and safety of the public. The Federal Communications Commission (FCC) developed the EAS to facilitate the communications infrastructure, set up standard rules, and mandate broadcasters and cable operators to acquire and install the necessary EAS hardware and to "voluntarily" participate in EAS.

Purpose

This Memorandum of Understanding between Minnesota Public Radio (MPR) and the Minnesota Emergency Alert System Team (MnEAST) is to establish a broad framework of cooperation with regard to the Emergency Alert System that was established by the Federal Communications Commission (FCC) under Part 11 of the FCC rules and regulations.

Recognition

MnEAST recognizes that MPR is a tax-exempt non-profit organization whose mission is to produce and to acquire radio programming of community value; to combine these programs into a non-profit radio service of the highest quality for broadcast through a network or radio stations to the people of Minnesota and its border communities; and to reflect the culture, events, issues and ideas of Minnesota and its people in radio broadcasts designed for national and international audiences.

MPR recognizes that MnEAST is made up of representatives of committed Broadcasters, Cable Operators, State and Local Emergency Management agencies, the National Weather Service, and other public and private organizations that have a role with the EAS; MnEAST is responsible for coordination of the Emergency Alert System for the citizens of Minnesota.

Principles of Cooperation

So that communications facilities of the Minnesota Public Radio network may be utilized to the extent required by the Minnesota Statewide EAS Plan, and to the extent permitted or required by law and regulation, Minnesota Public Radio and the Minnesota Emergency Alert System Team have agreed with the following:

1. MPR will provide their radio network for immediate transmission of the National Level Emergency Action Notification (EAN) and Emergency Action Termination (EAT) which originate from sources authorized by the Federal Emergency Management Agency (FEMA);

2. MPR will provide their radio network for transmission of the scheduled Required Monthly Test (RMT) which originates from sources authorized by the Minnesota EAS Statewide Plan;

3. MPR will provide their radio network for transmission of all Statewide EAS alerts originating from the Governor or his or her authorized representative;

4. MPR will work with the MnEAST Technical Sub-committee to provide an efficient and redundant path from the Primary Entry Point (PEP) station and the State Emergency Operations Center to the MPR network distribution facility;

5. MnEAST will work with MPR in obtaining the necessary financial resources to establish a reliable EAS distribution network by officially requesting from the state two items: a back up generator and an un-interruptable power supply system. This equipment will be used at the MPR network facility and enhance the network EAS reliability. The proposed generator will be initially owned by the state and maintained by MPR.

   MPR will take ownership of the generator in three (3) years after the installation date, (with the state having a security interest for an additional two (2) years.) This assumes that MPR will be providing statewide EAS distribution at that time;

6. One representative of MPR will become a member of the MnEAST. He/she will sit on the main team and the Technical Sub-committee;

7. MnEAST will distribute copies of this agreement through channels to its own organization, and other organizations, both public and private, which may have an active interest in distribution of National and State level EAS alerts and tests. In addition, this agreement will be included in the official EAS state plan;

8. MnEAST will hold MPR harmless from any liability MPR may incur due to MPR's activities hereunder.

Implementation

This memorandum shall take effect upon its signing by authorized representatives of the MPR and the MnEAST. This memorandum may be amended by mutual agreement of both parties and will remain in effect until terminated. MPR and MnEAST will review this agreement and coordinate such revisions as may by necessary on an annual basis or as needed. Upon 90 days written notice, this memorandum may be terminated by either party.

10/10/97
Date

Valerie Arganbright
Director of Network Stations
Minnesota Public Radio

10/10/97
Date

Don Heppelmann
Co-Chair MnEAST
Broadcast Representative

10/10/97
Date

Scott Melter
Co-Chair MnEAST
Cable Representative